

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. **(currently amended)** A method of method for switching between a WCDMA modem and a CDMA-2000 modem of modems, each modem being employed in an MM-MB (multimode-multiband) terminal being under a WCDMA idle state, when the MM-MB terminal being in a WCDMA idle state moves from an overlay zone into a CDMA-2000 zone, said method comprising the steps of:
 - (a) receiving a WCDMA signal transmitted from a WCDMA system, and measuring an Ec/Io (energy of carrier/interference of others) value by using the WCDMA signal;
 - (b) determining whether the Ec/Io value is smaller than a predetermined CDMA-2000 ON threshold TH_{ON};
 - (c) if the Ec/Io value is smaller than the than TH_{ON}, starting driving a timer to measure a time lapse, and determining whether the time lapse exceeds a preset CDMA-2000 ON condition time H_d;
 - (d) if the time lapse exceeds the exceeds H_d, activating a activating the CDMA-2000 modem; and
 - (e) performing an initialization for a CDMA-2000 system to switch the MM-MB terminal from the WCDMA idle state into a CDMA-2000 idle state.
2. **(currently amended)** The switching-method of claim 1, wherein the MM-MB terminal inspects a CPICH (common pilot channel) periodically to receive the

WCDMA signal at step (a); and

the CDMA-2000 modem is activated in step (d) while the WCDMA signal is still being received over the CPICH.

3. **(currently amended)** The ~~switching~~-method of claim 1, wherein the time lapse at step (c) is a cumulative time during which the Ec/Io value is maintained smaller than the CDMA-2000 ON threshold TH_{ON}.

4. (original) The method of claim 1, wherein the initialization at step (e) is performed through a system determination substate, a pilot channel acquisition substate and a synchronous channel acquisition substate.

5. **(currently amended)** The method of claim 1, wherein, after being switched into the CDMA-2000 idle state at step (e), the MM-MB terminal deactivates the controls a WCDMA modem ~~to be inactivated~~.

6. **(currently amended)** A method of method for switching between a WCDMA modem and a CDMA-2000 modem of modems, each modem employed in an MM-MB terminal, being under a WCDMA traffic state when the MM-MB terminal moves from an overlay zone into a CDMA-2000 zone while handling a WCDMA call, said method comprising the steps of:

(a) receiving a WCDMA signal transmitted from a WCDMA system, and measuring an Ec/Io (energy of carrier/interference of others) value by using the WCDMA signal;

(b) determining whether the Ec/Io value is smaller than a predetermined CDMA-2000 ON threshold TH_{ON};

(c) if the Ec/Io value is smaller ~~than the~~ than TH_{ON}, ~~starting driving a timer to measure a time lapse, and determining whether the time lapse exceeds a preset CDMA-2000 ON condition time H_d;~~

- (d) if the time lapse ~~exceeds the~~ exceeds H_d , activating a ~~activating the~~ CDMA-2000 modem, and ~~then~~ determining whether a ~~whether the~~ WCDMA call has been ~~call~~ terminated; and
- (e) if the WCDMA call is determined ~~to be to have been~~ terminated, performing an initialization for a CDMA-2000 system to switch the MM-MB terminal into a CDMA-2000 idle state.

7. **(currently amended)** The method of claim 6, wherein
the MM-MB terminal inspects a CPICH (common pilot channel) periodically to receive the WCDMA signal at step (a); and
~~the CDMA-2000 modem is activated in step (d) while the WCDMA call is still being handled by the WCDMA modem.~~

8. **(currently amended)** The method of claim 6, wherein the time lapse at step (c) is a cumulative time during which the E_c/I_o ~~value~~ is maintained smaller than the CDMA-2000 ON threshold TH_{ON} .

9. **(currently amended)** The switching-method of claim 6, wherein, if the WCDMA call is ~~determined to have not been terminated~~ terminated, ~~at step (d), the method further includes~~ the steps of:

- (d1) determining whether the E_c/I_o ~~value~~ is larger than a predetermined CDMA-2000 OFF threshold TH_{OFF} ;
- (d2) if the E_c/I_o ~~value~~ is larger than ~~the~~ TH_{OFF} , ~~starting driving the timer~~ to measure another time lapse, and determining whether said another time lapse exceeds a preset CDMA-2000 OFF condition time H_c ; and
- (d3) if said another time lapse ~~exceeds the~~ exceeds H_c , ~~inactivating deactivating~~ the CDMA-2000 modem ~~that has been activated at step (d)~~ and returning to step (a).

10. **(currently amended)** The method of claim 9, wherein, if the Ec/Io value is not larger than the than TH_{OFF} at step (d1), the MM-MB terminal returns to step (d) to determine once more whether the WCDMA call is call has been terminated.

11. **(currently amended)** The method of claim 9, wherein said another time lapse at step (d2) is a cumulative time during which the Ec/Io value is maintained larger than the CDMA-2000 OFF threshold TH_{OFF} .

12. **(currently amended)** The method of claim 9, wherein, if the another time lapse does not exceed the CDMA-2000 OFF condition time H_c at step (d2), the MM-MB terminal returns to step (d) to determine once more whether the WCDMA call is call has been terminated.

13. **(currently amended)** The method of claim 6, wherein, if the WCDMA call is terminated, step (e) further includes the sub-steps of:

- (e1) inspecting another service channel FA (frequency assignment) of the WCDMA system;
- (e2) determining whether another WCDMA signal is inspected found; and
- (e3) if said another WCDMA signal is inspected found, switching the MM-MB terminal into a WCDMA idle state.

14. **(currently amended)** The method of claim 13, wherein, if said another WCDMA signal is not found inspected at step (e2), the MM-MB terminal performs an performs said initialization into the CDMA-2000 system to be switched into a into said CDMA-2000 idle state.

15. **(currently amended)** The method of claim 14, wherein, after being switched into the CDMA-2000 idle state, the MM-MB terminal deactivates the controls a WCDMA modem to be inactivated.

16. **(currently amended)** A method of method for switching between a CDMA-2000 modem and a WCDMA modem of modems, each modem being employed in an MM-MB (multimode-multiband) terminal being under a CDMA-2000 idle state, when the MM-MB terminal being in a CDMA-2000 idle state moves from a CDMA-2000 zone into an overlay zone, said method comprising the steps of:

- (a) monitoring a paging channel of a CDMA-2000 system periodically while maintaining the MM-MB terminal in the CDMA-2000 idle state;
- (b) analyzing an overhead message received from a from the CDMA-2000 system and determining whether the MM-MB terminal is located in the overlay zone;
- (c) if the MM-MB terminal is determined to be located in the overlay zone, activating a activating the WCDMA modem; and
- (d) performing an initialization process for a WCDMA system to switch the MM-MB terminal from the CDMA-2000 idle state into a WCDMA idle state.

17. **(currently amended)** The method of claim 16, wherein the MM-MB terminal determines whether the MM-MB terminal is located in the overlay zone by investigating a base ID of a system parameter message included in the overhead message analyzed at step (b).

18. **(currently amended)** The method of claim 16, wherein, if the MM-MB terminal is not determined to be located in the overlay zone at step (b), the MM-MB terminal returns to step (a) to monitor the paging channel again.

19. **(currently amended)** The method of claim 16, wherein, after being switched into the WCDMA idle state, the MM-MB terminal deactivates the renders a CDMA-2000 modem inactivated.

20. **(currently amended)** A method of method for switching between a CDMA-2000 modem and a WCDMA modem of modems, each modem being employed in an MM-MB (multimode-multiband) terminal being under a CDMA-2000 traffic state, when the MM-MB terminal being in a CDMA-2000 traffic state moves from a CDMA-2000 zone into an overlay zone, said method comprising the steps of:

- (a) monitoring a paging channel of a CDMA-2000 system periodically while maintaining the MM-MB terminal in the CDMA-2000 traffic state to handle a CDMA-2000 call;
- (b) analyzing an overhead message received from a from the CDMA-2000 system and determining whether the MM-MB terminal is located in the overlay zone;
- (c) if the MM-MB terminal is determined to be located in the overlay zone, determining whether a whether the CDMA-2000 call is call has been terminated while maintaining the MM-MB terminal in the CDMA-2000 traffic state;
- (d) if the CDMA-2000 call is determined to be to have been terminated, activating a activating the WCDMA modem; and
- (e) performing an initialization process for a WCDMA system to switch the MM-MB terminal into a WCDMA idle state.

21. **(currently amended)** The method of claim 20, wherein the MM-MB terminal determines whether the MM-MB terminal is located in the overlay zone by investigating a base ID of a system parameter message included in the overhead message analyzed at step (b).

22. **(currently amended)** The method of claim 20, wherein, if the MM-MB terminal is not determined to be located in the overlay zone at step (b), procedure the MM-MB terminal returns to step (a) to monitor the paging channel again.

23. **(currently amended)** The method of claim 20, wherein, after being switched into the WCDMA idle state, the MM-MB terminal deactivates the renders a CDMA-2000 modem

inactivated.

24. **(currently amended)** A multimode-multiband terminal capable of accommodating both a synchronous CDMA-2000 service and an asynchronous WCDMA service and operating in at least two frequency bands, said terminal comprising:

an RF (radio frequency) antenna for transceiving a CDMA-2000 signal and/or a WCDMA signal;

an RF transceiver coupled to the RF antenna for demodulating a WCDMA pilot signal received from the RF antenna and outputting the demodulated WCDMA pilot signal;

a pilot signal measurement unit coupled to the RF transceiver for measuring an intensity of the demodulated WCDMA pilot signal to generate an Ec/Io value;

a WCDMA modem and a CDMA-2000 modem coupled to the RF transceiver for processing a digital signal received from the RF transceiver and performing a call processing according to protocols defined by a WCDMA standard and a CDMA-2000 standard, respectively;

a flash-memory for storing a modem-to-modem switching program configured for capable of performing a switching between the WCDMA modem and the CDMA-2000 modem based on an the Ec/Io value; and

a controller coupled to the pilot signal measurement unit, the memory and the WCDMA and CDMA-2000 modems for

(i) receiving the Ec/Io value from the pilot signal measurement unit, and

(ii) loading and executing the modem-to-modem switching program

from the memory to activate and activating the CDMA-2000 modem if a time lapse, during which the Ec/Io value is maintained smaller than a predetermined CDMA-2000 ON threshold $T_{H_{ON}}$, is greater than a preset CDMA-2000 ON condition time H_d .

25. **(currently amended)** The multimode-multiband terminal of claim 24, wherein the

controller loads the modem-to-modem switching program at the moment the Ec/Io value starts to be smaller than the CDMA-2000 ON threshold TH_{ON} or when it is determined that the multimode-multiband terminal enters an overlay zone by analyzing system information.

26. **(currently amended)** The multimode-multiband terminal of claim 24, wherein, after the CDMA-2000 modem is activated and an initialization into a CDMA-2000 system is completed so that the multimode-multiband terminal is switched into a CDMA-2000 idle state, the controller deactivates controls the WCDMA modem under operation to be inactivated.

27. **(currently amended)** The multimode-multiband terminal of claim 24, wherein, even if the CDMA-2000 modem has been activated is activated based on the Ec/Io value being smaller than TH_{ON} during the time lapse greater than H_d, the controller still deactivates controls the CDMA-2000 modem to be inactivated if another time lapse, during which the Ec/Io value is maintained larger than a predetermined CDMA-2000 OFF threshold TH_{OFF}, is greater than a preset CDMA-2000 OFF condition time H_c.

28. **(currently amended)** The multimode-multiband terminal of claim 24, wherein, after the WCDMA modem is activated and an initialization into a WCDMA system is completed so that the multimode-multiband terminal is switched into a WCDMA idle state, the controller deactivates controls the CDMA-2000 modem under operation to be inactivated.

29. **(currently amended)** The multimode-multiband terminal of claim 24 claim 27, wherein information upon the CDMA-2000 ON threshold TH_{ON}, the CDMA-2000 ON condition time H_d, the CDMA-2000 OFF threshold TH_{OFF} and the CDMA-2000 OFF condition time H_c are stored in the modem to modem switching program memory.

30. **(currently amended)** The multimode-multiband terminal of claim 24, further

comprising a timer for measuring ~~detecting~~ the time lapse and reporting the time lapse to the controller.

31. (new) The method of claim 1, wherein the CDMA-2000 modem is activated in step (d) before the MM-MB terminal leaves the overlay zone and while the WCDMA modem is still being activated to keep the MM-MB terminal in the WCDMA idle state.

32. (new) The method of claim 6, wherein the CDMA-2000 modem is activated in step (d) before the MM-MB terminal leaves the overlay zone and while the WCDMA modem is still being activated to handle the WCDMA call.